

Kindly add the following new claim 14:

--14. The VDF polymerization process according to claim 1 wherein said surfactant has a number average molecular weight Mn comprised between 400-550.--

### **REMARKS**

In order to more particularly point out the claimed invention, claim 1 is amended and claim 2 is rewritten as claim 13. The amendments in claim 1 find support in the specification at page 5, lines 21-23 and new claim 13 is supported by the specification at page 10, lines 6-10. No new matter is added.

It is applicant's position that amended claim 1 clearly recites novel limitations for producing a VDF polymer solving the technical problems existing in the art. The present invention is distinguished over Giannetti et al (US 4,864,006) and Abusleme et al (EPO 625,526).

The process of the invention is carried out in order to obtain VDF polymers endowed with improved levels of white index even after thermal treatment at high temperatures. Nowhere in the prior art cited by the Examiner is there any hint that the

process claimed in these patents would impart to the VDF polymers the properties above cited.

The results of the present invention are obtained by employing a surfactant based on perfluoropolyethers (PFPE) having carboxylic end group salified with a sodium salt. This feature is not present in the prior art cited by the Office. In fact, Giannetti's invention is carried out by using a surfactant PFPE having a carboxylic end group salified with  $\text{NH}_4^+$  while Abusleme's invention is carried out by using a surfactant PFPE having a carboxylic end group salified with  $\text{K}^+$ . Furthermore, both Abusleme's and Giannetti's examples relate to a polymerization processes for producing tetrafluoroethylene (TFE) and not to processes for preparing VDF.

The Applicant has surprisingly and unexpectedly found that the use of a surfactant based on perfluoropolyethers with carboxylic end groups salified with NaOH and having the *narrow distribution of molecular weight (MWD) as recited in claim 1*, enables the manufacturer to obtain VDF polymers endowed with improved levels of white index in comparison with salified surfactants not having the MWD as recited in claim 1 of the present application.

Thus, applicants respectfully traverse the position of the Office that "Giannetti's 6 carbon surfactants as disclosed would inculcate to applicants claimed molecular weight". Even if Giannetti's surfactants have an average molecular weight within the range of claim 1, these surfactants surely do not possess the molecular weight distribution such that fractions having a number average weight greater than 700 are present in amount less than 5% by weight. In fact, in Giannetti's invention no such selection of fractions having a number average weight is disclosed in order to reduce the presence in the surfactant of the fractions having molecular weights greater than 700. This is an important point because it is this characteristic of the process that allows one to obtain Applicant's improvement. The key feature of Applicant's invention is to reduce in the surfactant the presence of said fractions to an amount less than 5% by weight.

The Office should take note that comparative Example 3 of the present application is an example disclosing the use of a microemulsion according to Giannetti et al, wherein the surfactant has an average molecular weight of 570, but it contains 28% by weight of fractions having a molecular weight greater than 700. This surfactant, characterized by a wide distribution of molecular weights, is outside the conditions recited in claim 1 of the present application. In fact, the surfactant according to Giannetti causes the final polymer product to have large values of residual surfactant

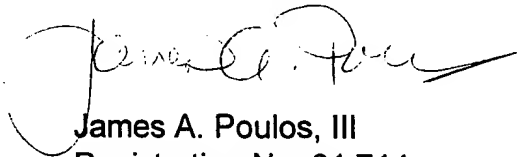
and low levels of white index. This is shown in tables 2 and 3 of the specification, wherein comparisons between the microemulsion according to the present invention (Example 1) and microemulsion according to Giannetti et al (Example 3) are presented.

Furthermore, in these documents there is neither mention of a surfactant possessing the characteristics of claim 1 of the present invention nor disclosure directed to discoloration and the white index of the final polymer. Consequently, a person of ordinary skill in the art would not infer from these references how to solve the technical problem solved by the present invention.

In view of the foregoing applicants respectfully submit that the subject application is now in condition for a receipt of a Notice of Allowance.

In the event this paper is deemed not timely filed the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No.14-1060 along with any other additional fees which may be required with respect to this paper; any overpayment should be credited to the account.

Respectfully submitted,  
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